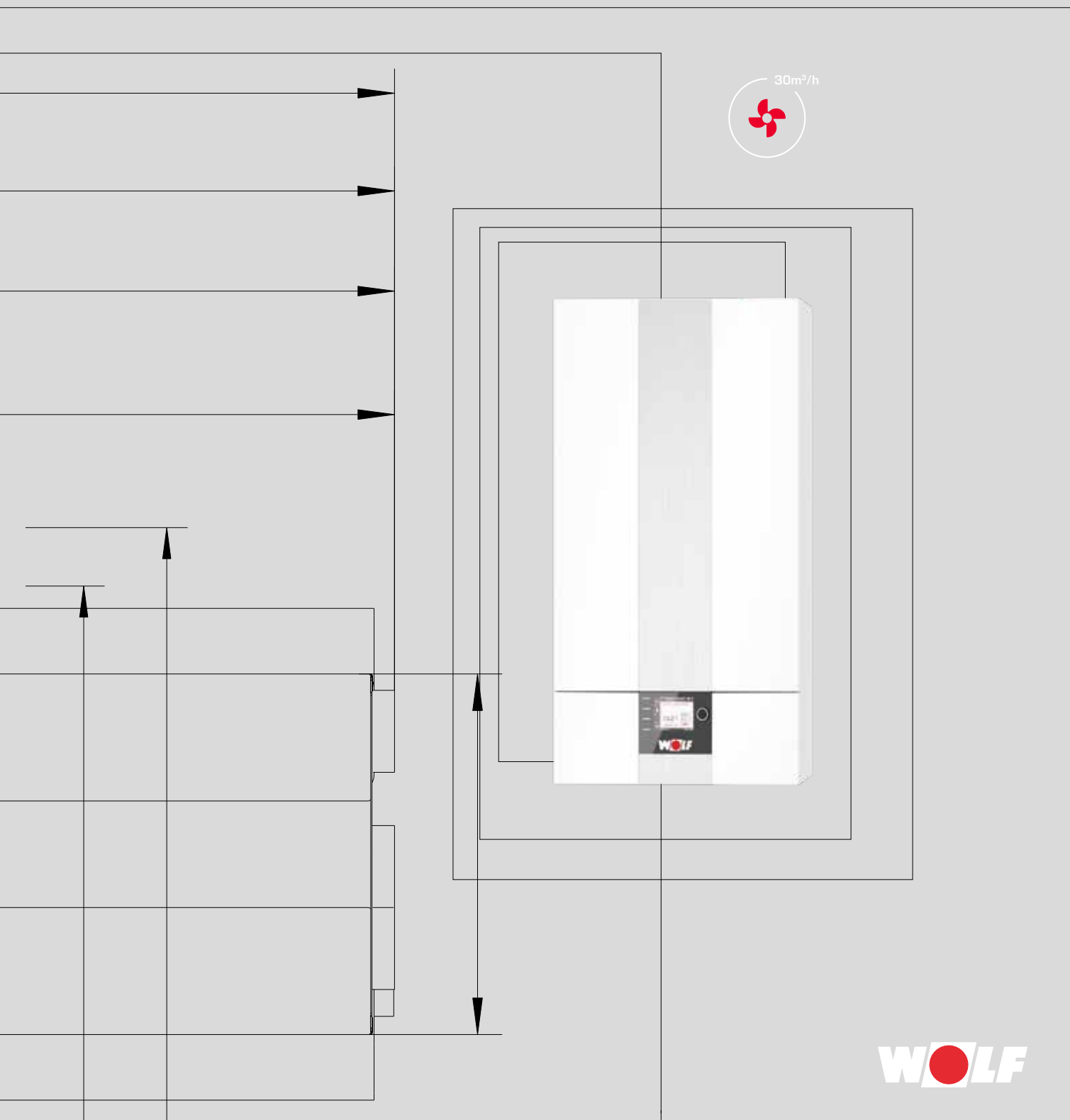
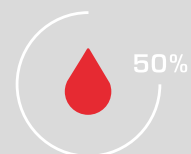
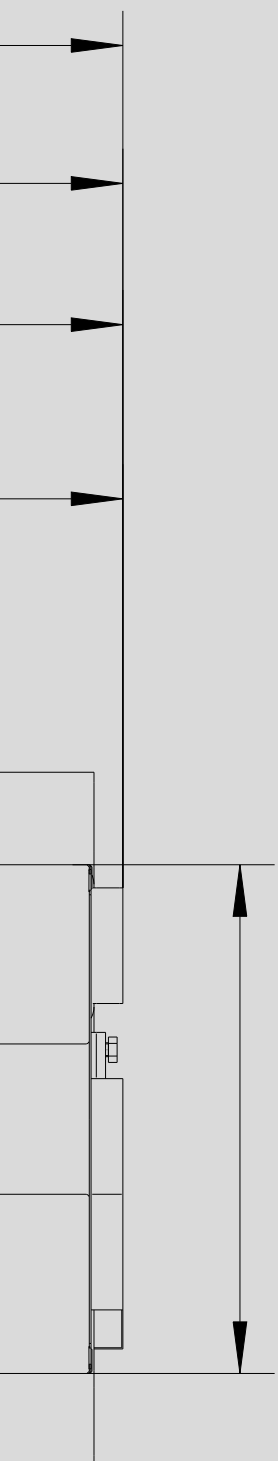


WOLF GAS CONDENSING BOILERS COMFORTLINE

CGB-2-38/55





THE EXTENSIVE PRODUCT RANGE

offered by system supplier WOLF provides ideal solutions for commercial and industrial buildings, new build and modernisation projects alike.

The range of WOLF control units can meet any requirement for heating convenience.

All equipment is easy to operate, highly energy efficient and reliable.

Solar thermal systems can be swiftly integrated into existing systems.

WOLF equipment is easy and quick to install and maintain.

COMFORTLINE GAS CONDENSING BOILERS	04-05
SPECIFICATION	06-08
STANDARD CONTROL UNITS	09
CONTROL ACCESSORIES	10-12
AIR / FLUE GAS ROUTING	13-14
ACCESSORIES	15-17

Gas condensing boilers, closed combustion chamber,
for open flue or room sealed operation

**Highly efficient robot-welded V4A finned
tube heat exchangers with 7 times the
surface area of smooth tube heat
exchangers**

Modulation range
15-100 %

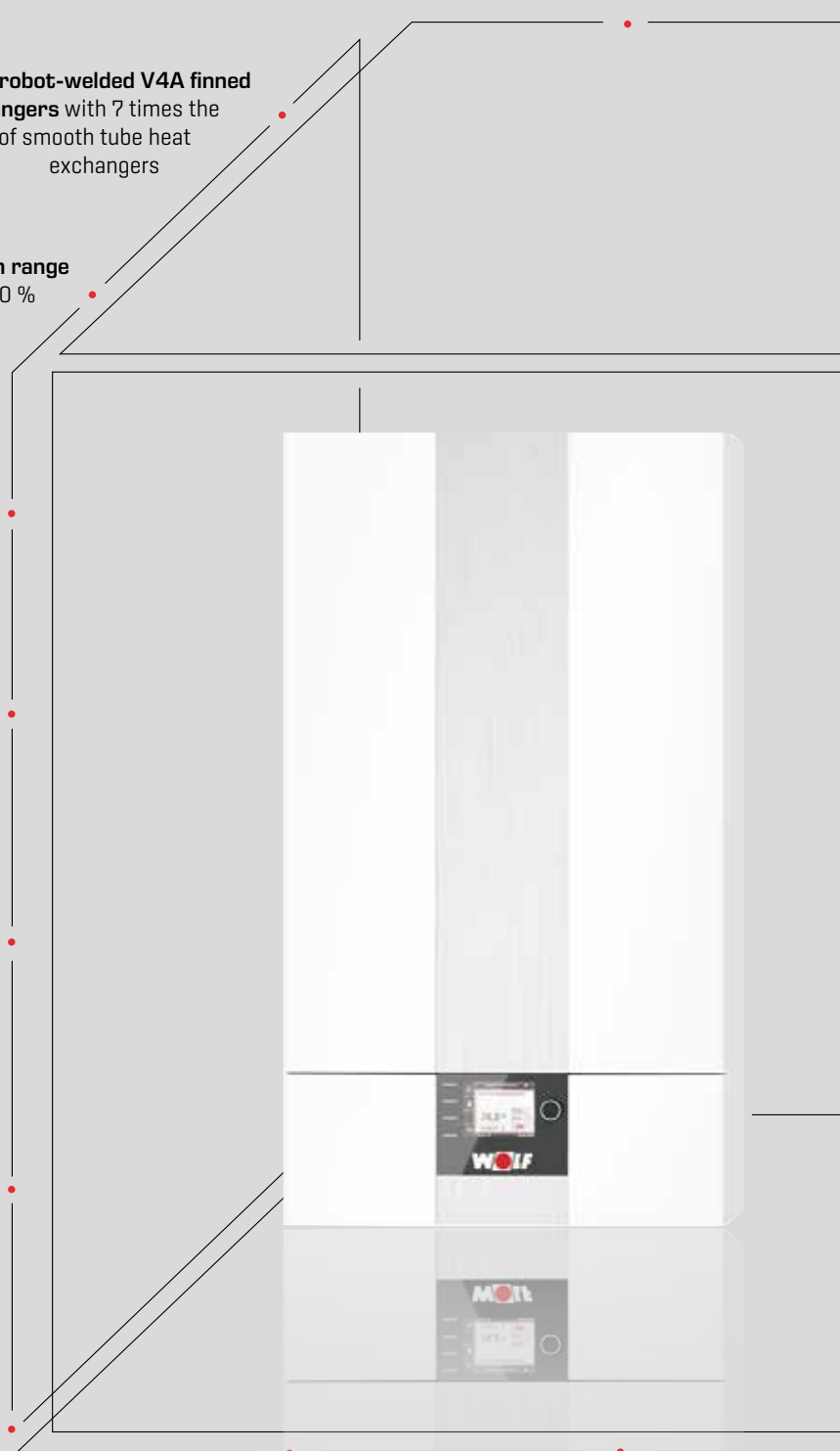
Extremely robust and durable structure

Included as standard
modulating high efficiency pump,
flow rate sensor, flue gas exhaust return
damper and safety valve connection

Intelligent pump spread control
for optimum use of condensing technology

Cyclone inflow
for a particularly clean and stable
combustion process

**No overflow valve,
no return temperature raising facility**
- for maximum utilisation of the condensing effect



Easy to replace existing equipment:
sophisticated accessory plan and
hydraulic connections which are
compatible with previous versions

Maintenance
without draining
hot water

Smart home compatible
with the integrated WOLF Link home

WOLF WRS-2:BM2 control system with commissioning assistant

15

BENEFITS OF WOLF GAS CONDENSING BOILERS 38 TO 55 KW

CGB-2-38/55

5x cascade

Fully hybrid-capable
with Wolf heat pumps

Compact design:

Removable casing cover for front access,
minimal side spacing required



COMFORTLINE GAS CONDENSING BOILERS

CGB-2-38 / 55

WALL MOUNTED GAS CONDENSING BOILER FOR HEATING

MODULATION RANGE

for flow / return, 50 / 30°C

CGB-2-38	from 6.3 to 38 kW
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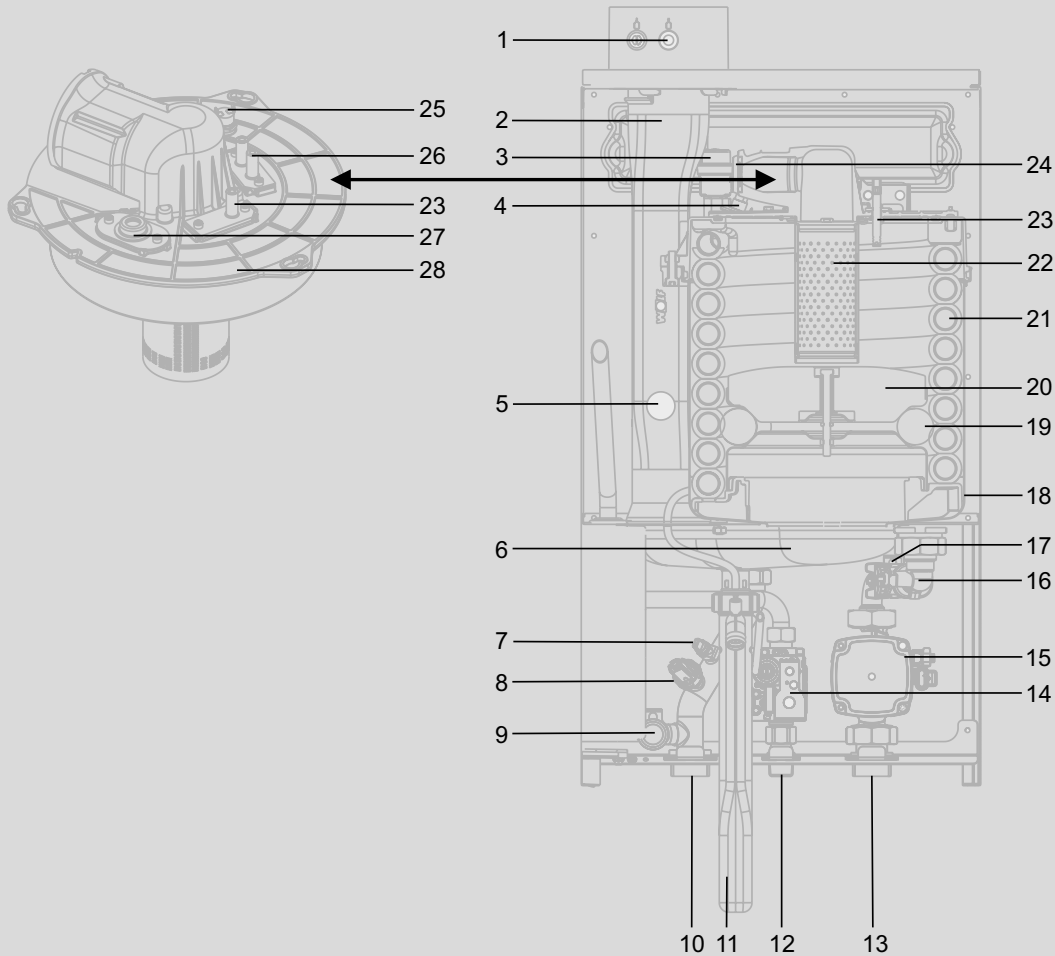
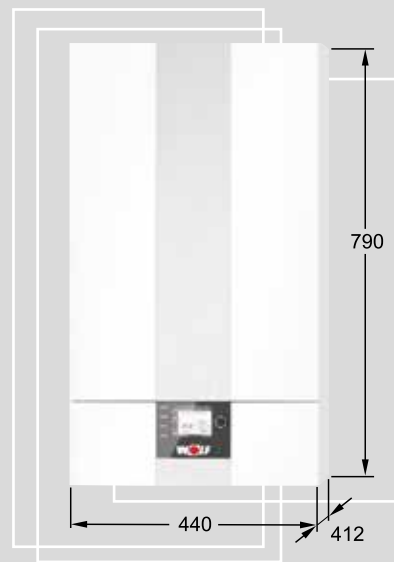
CGB-2-55	from 9.2 to 55 kW
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Possible OUTPUT REDUCTION

for flow / return, 50 / 30°C

CGB-2-38	HG03/HG04	90%	34.9 kW
----------	-----------	-----	---------

CGB-2-55	HG03/HG04	88%	49.9 kW
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- 1 Appliance connection with flue gas test port
- 2 Flue pipe
- 3 Quick-action air vent valve
- 4 High limit safety cut-out eHLSC
- 5 Flue gas temperature sensor
- 6 Stainless steel condensate pan
- 7 Boiler water temperature sensor
- 8 Pressure sensor
- 9 Safety valve connection
- 10 Heating flow
- 11 Condensate trap
- 12 Gas supply pipe
- 13 Heating return
- 14 Gas combination valve

- 15 Heating circuit pump, modulating
- 16 Return temperature sensor
- 17 Flow rate sensor
- 18 Flue gas collector
- 19 Displacement device insulating ring
- 20 Displacer
- 21 Heating water heat exchanger
- 22 Burner
- 23 Ionisation electrode
- 24 Back draught safety device
- 25 Combustion chamber cover HLSC
- 26 Ignition electrode
- 27 Sight glass
- 28 Combustion chamber cover

SPECIFICATION

	CGB-2	38	55
Energy efficiency class, central heating		A	A
Rated heating output at 80/60°C	kW	34.9	51.1
Rated heating output at 50/30°C	kW	38	55
Rated heat input	kW	36.4	53.3
Lowest heating output (modulating) at 80/60 °C	kW	5.3/6.7 ¹⁾	7.8/9.8 ¹⁾
Lowest heating output (modulating) at 50/30 °C	kW	6.3/7.6 ¹⁾	9.2/11.0 ¹⁾
Lowest heat input (modulating)	kW	6.3/7.3 ¹⁾	9.1/10.5 ¹⁾
Heating flow connection	G	1 ¼"	1 ¼"
Heating return connection	G	1 ¼"	1 ¼"
Drain outlet (condensate)		1"	1"
Gas connection	R	¾"	¾"
Balanced flue connection	mm	80/125	80/125
Dimensions:			
Depth			412 mm
Width			440 mm
Height			790 mm
Air / flue gas routing	Type	B23, B33, C13(x), C33(x), C53, C53(x), C63(x), C83(x), C93(x)	
Gas category	DE / AU	II ₂ ELL3P	
Gas supply details:			
Natural gas E/H (net cv = 9.5 kWh/m ³ = 34.2 MJ/m ³)	m ³ /h	3.83	5.61
Natural gas LL (net cv = 8.6 kWh/m ³ = 31.0 MJ/m ³)	m ³ /h	4.23	6.2
LPG P (net cv = 12.8 kWh/kg = 46.1 MJ/kg)	kg/h	2.84	4.16
Supply pressure, natural gas (permissible min./max.)	mbar	20 [17-25]	
Supply pressure, LPG gas (permissible min./max.)	mbar	50 [42.5-57.5]	
Efficiency at rated load at 80/60 °C (net cv/gross cv)	%	98/86	98/88
Efficiency at 30 % partial load and TR=30 °C (net cv/gross cv)	%	110/99	110/99
Flow temperature, factory setting	°C	75	
Flow temperature up to approx.	°C	90	
Max. overall positive pressure	bar/MPa	6.0/0.6	
Max. residual head for heating circuit: high efficiency pump (EEI < 0.20):			
1600 l/h flow rate [38 kW at Δt=20 K]	mbar	630	
2360 l/h flow rate [55 kW at Δt = 20 K]	mbar	300	
DHW capacity of heating water heat exchanger	litres	2.7	
Flue gas temperature 80/60-50/30 at Q _{max}	°C	62-49	72-57
Flue gas temperature 80/60-50/30 at Q _{min}	°C	59-37	60-37
Flue gas mass flow rate at Q _{max}	g/s	17.5	25.6
Flue gas mass flow rate at Q _{min}	g/s	3.0	4.4
Available gas fan draught at Q _{max}	Pa	159	164
Available gas fan draught at Q _{min}	Pa	7[10]*	
NOx class		6	
Amount of condensate at 40/30°C	l/h	Approx. 2.7	Approx. 3.4
Condensate pH value		approx. 2.8	
Power consumption on standby	W	3	
Maximum power consumption	W	135	160
IP rating	IP	IP X4D	
Electrical connection/fuse protection		230V / 50Hz	
Total weight	kg	47	

* Manual flue length compensation setting

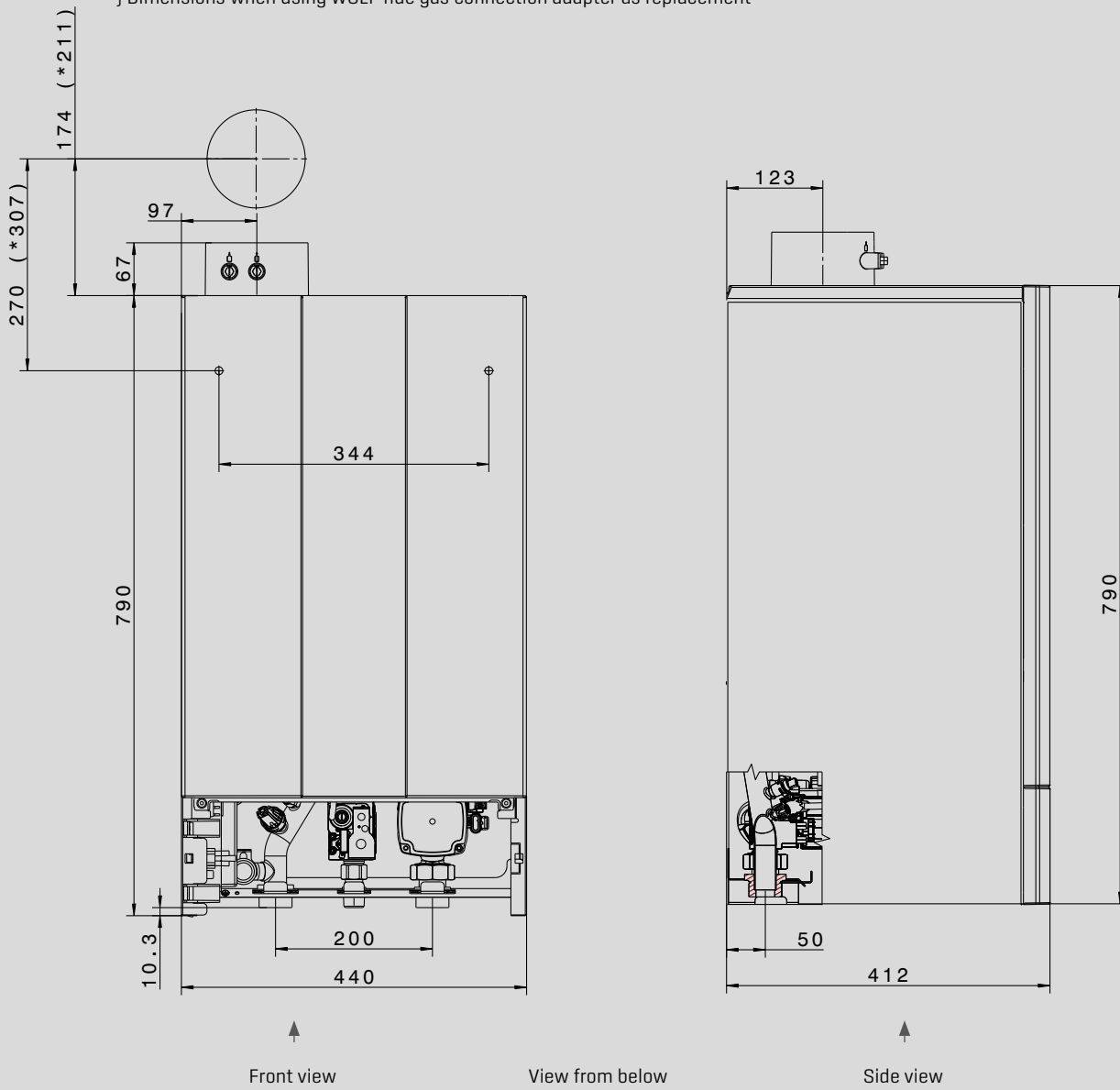
¹⁾ Natural gas / LPG [G31]



DIMENSIONS

+ Connection dimensions

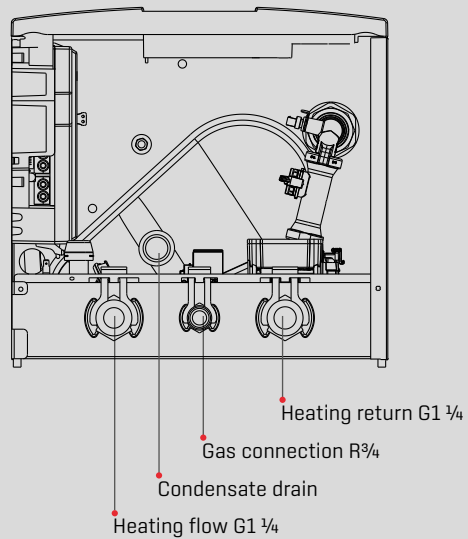
*) Dimensions when using WOLF flue gas connection adapter as replacement



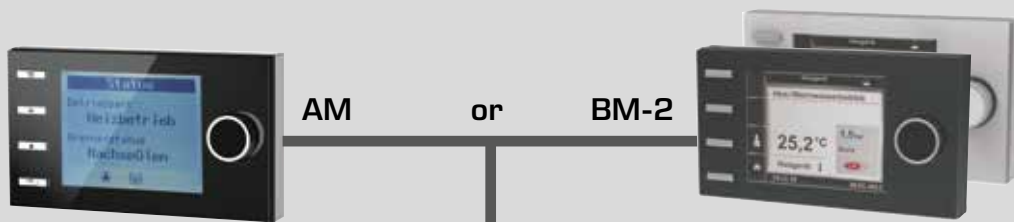
Front view

View from below

Side view



The operation of a CGB-2 gas condensing boiler requires either an AM display module or a BM-2 programming unit.



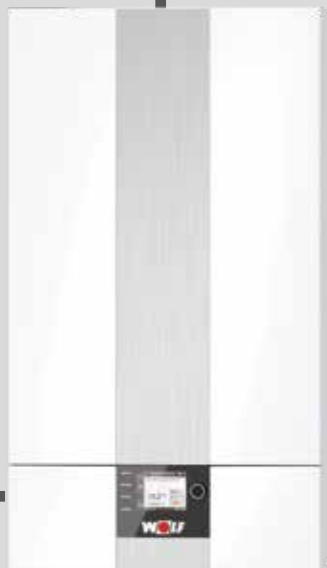
The AM functions solely as a display module for the heat generator. Appliance-specific parameters and values can be programmed and displayed.

AM display module

- Display module for the heat generator
- Only required if BM-2 is used as a remote control or in a cascade circuit / hybrid application
- Operated by rotary selector with pushbutton function
- 4 quick start keys for frequently used functions
- Backlit LCD screen
- AM is always inside the heat generator

BM-2 programming unit

- In black and white
- Weather-compensated flow temperature
- Time programs for heating, DHW and DHW circulation
- 3.5" colour display
- Simple user prompts via plain text display
- Operated by rotary selector with pushbutton function
- 4 function keys for frequently used functions
- microSD card slot for software update
- Installation either inside the heat generator control unit or as a remote control in a wall mounting base
- Only one programming unit required for multi circuit systems
- Can be extended with MM-2 mixer module (up to 7 mixing circuits)
- BM-2 can also be used as a remote control for the CWL Excellent ventilation unit (one programming unit for heating and ventilation)



2-wire eBus connection

AM display module or BM-2 programming unit an essential requirement

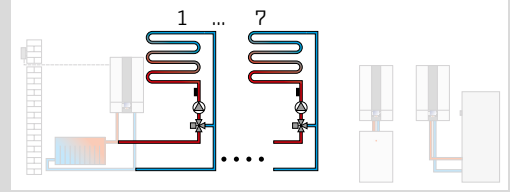


BM-2 programming unit in black or white
(if BM-2 is inside the heat generator, max. 6 additional remote controls are possible)



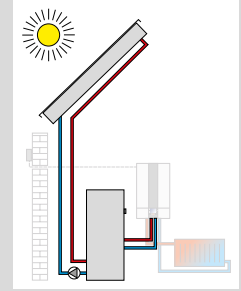
MM-2 mixer module

- Extension module to control one mixing circuit
- Weather-compensated flow temperature control
- Easy controller configuration by selecting predefined system versions
- BM-2 programming unit with wall mounting base can be extended to serve as a remote control
- Rast 5 connection technology
- Incl. flow temperature sensor



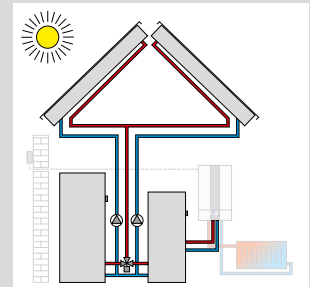
Solar module SM1-2

- Extension module to control one solar circuit incl. collector temperature sensor, cylinder temperature sensor and sensor wells
- Greater energy savings in conjunction with Wolf heat generators, due to intelligent cylinder reheating, i.e. blocking cylinder reheating when there is sufficient solar yield
- Heat metering with external heat meter
- Function check for flow rate and gravity brake
- Temperature differential control for one heat consumer
- Maximum cylinder temperature limit
- Display of the set and actual values on the BM-2 programming unit
- Integrated operating hours meter
- eBus interface with automatic energy management
- Rast 5 connection technology
- Part of the standard delivery for CSZ-2



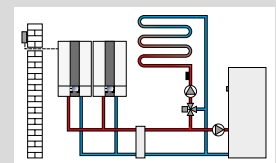
Solar module SM2-2

- Extension module to control one solar thermal system with up to 2 cylinders and 2 collector arrays, incl. 1 collector sensor and 1 cylinder sensor, each with sensor well
- Easy controller configuration by selecting one of the preset system versions
- Greater energy savings in conjunction with Wolf heat generators, due to intelligent cylinder reheating, i.e. blocking cylinder reheating when there is sufficient solar yield
- Heat metering with external heat meter for all configurations
- Selection of cylinder operating mode
- Display of the set and actual values on the BM-2 programming unit
- eBus interface with automatic energy management
- Rast 5 connection technology



KM-2 cascade module

- Extension module to control systems with a low loss header or cascade operation
- Suitable for gas condensing boilers (5 appliances)
- Easy controller configuration by selecting one of the preset system versions
- Control of one mixing circuit
- BM-2 programming unit slots into wall mounting base and can be extended to serve as a remote control
- 0-10 V input for BMS systems; fault message output 230 V
- eBus interface with automatic energy management
- Rast 5 connection technology



2-wire eBus connection



RM-2 room module

4 in 1: Automatic detection of the function based on the system components:

- Room temperature controller with 1-day / 7-day program
- Remote control for mechanical ventilation unit CWL Excellent / CWL 2 [simultaneous with room temperature control]
- Remote control of all heating or mixing circuits [with BM/BM-2 in the system]
- Remote control for up to 7 individual heating circuits with multiple RM-2 units [with BM/BM-2 in the system]

- Illuminated touchscreen
- Integrated room temperature sensor
- Connection via eBus interface
- Many functions: Holiday mode, fault messages, temperature displays, etc.
- Compatible with WOLF Smartset



AFB analogue remote control

- Simple WRS remote control for heating circuits and mixing circuits
- Each heating circuit can be operated separately with a remote control
- Integrated room temperature sensor
- Temperature and program selection via rotary selector
- Only in conjunction with BM-2 programming unit



ISM8i Ethernet interface module

Interface module with disclosed TCP/IP protocol for system-independent integration of WOLF heating appliances and ventilation units.



KNX interface kit

Interface set for integration of WOLF heat generators into a KNX network

Consisting of:

- Interface module ISM8i, KNX-IP-BAOS module
- Installation and operating instructions, network cable

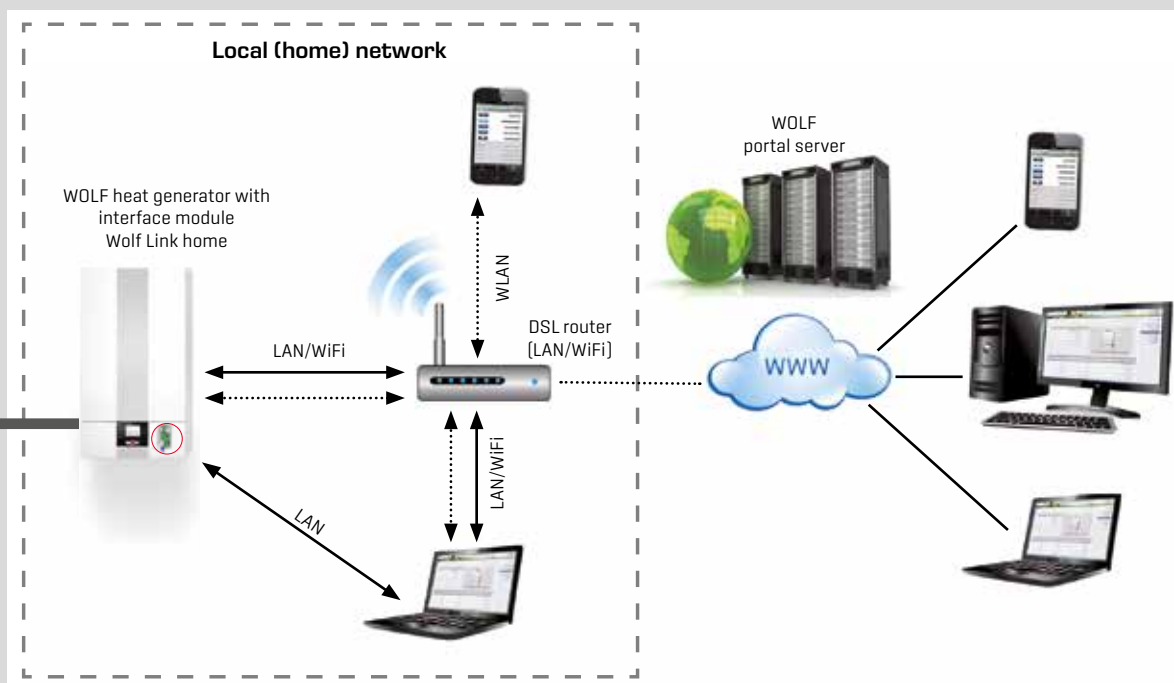


I/O module

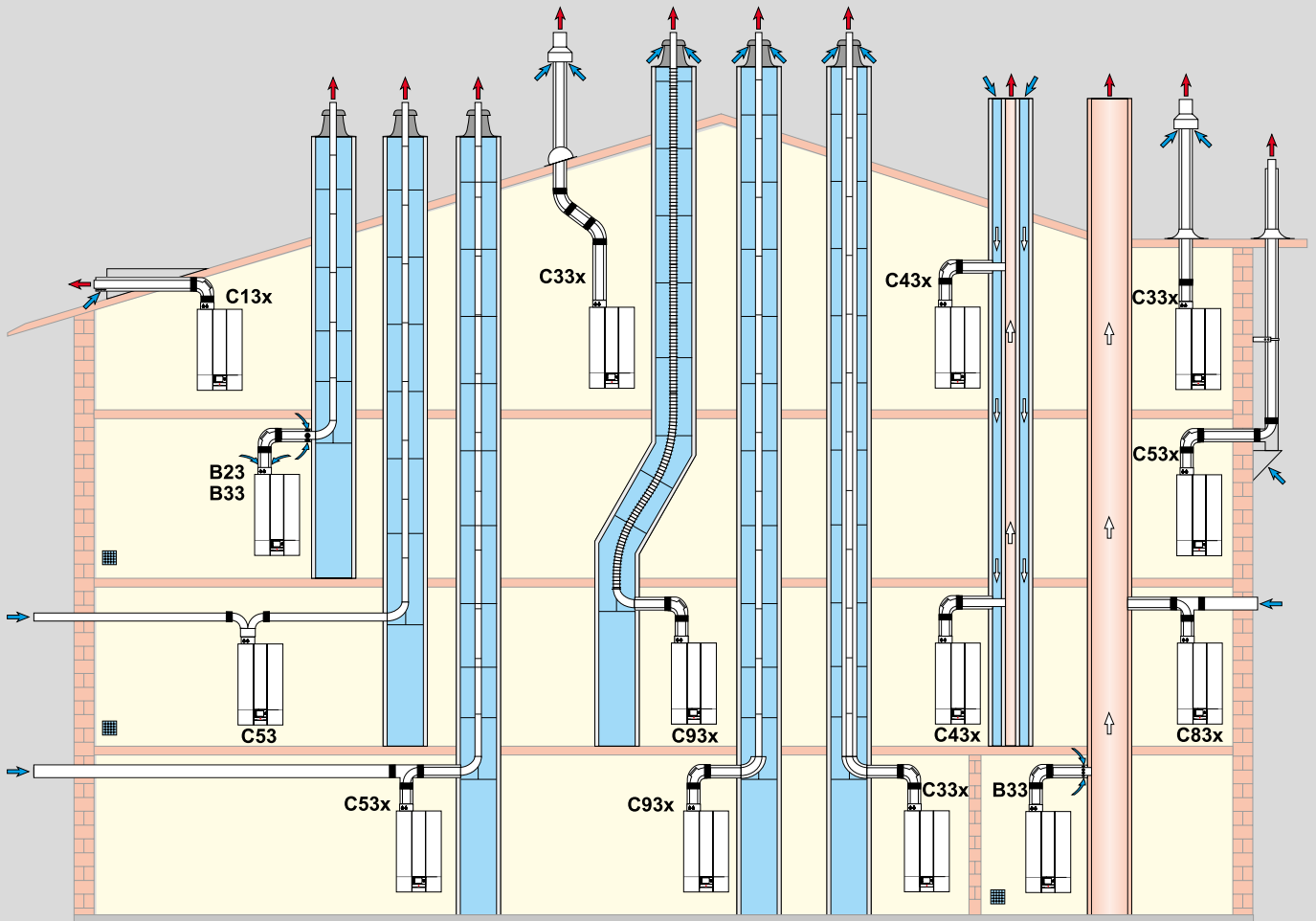
Extension module for 2 programmable inputs and outputs

WOLF LINK HOME

LAN / WiFi interface for accessing the control unit via the internet or a local network. Operation via iOS, Android or the WOLF portal. Installation in the appliance control unit.



AIR/FLUE GAS ROUTING FOR GAS CONDENSING BOILERS



Provide ventilation for B23, B33, C53

AIR/FLUE GAS ROUTING FOR GAS CONDENSING BOILERS

CGB-2-38/55

Design variants		Maximum length ¹⁾²⁾ [m]		
			CGB-2-38	CGB-2-55
B23	Flue in a shaft and combustion air directly via appliance (open flue)	DN 80	39	17
		DN 100	50	50
B33	Flue inside a shaft with horizontal concentric connection pipe (open flue)	DN 80	35	13
		DN 110	50	50
B33	Connection to a moisture-resistant chimney with horizontal concentric connection pipe (open flue)		Calculation to EN 13384 (balanced flue chimney manufacturer)	
C13x ⁴⁾	Horizontal roof outlet through pitched roof (room sealed- onsite dormer)	DN 80/125	15 ³⁾	6 ³⁾
		DN 110/160	50 ³⁾	29 ³⁾
C33x	Vertical concentric roof outlet through a pitched or flat roof, vertical concentric balanced flue for installation in a shaft, (balanced flue) without connection piece	DN 80/125	19	9
		DN 110/160	39	36
C33x	Vertical concentric roof outlet through a pitched or flat roof, vertical concentric balanced flue for installation in a shaft, (room sealed) with connection piece	DN 80/125 flexible	11	5
C53	Connection to flue in the shaft and ventilation air supply through exterior wall (room sealed)	DN 80	34	14
		DN 110	50	50
C53x	Connection to a flue on an external wall (room sealed) Combustion air intake via external wall	DN 80	34	14
		DN 110	50	50
C63x	Connection to a flue on an external wall (room sealed)		Calculation to EN 13384 (balanced flue chimney manufacturer)	
C83x	Concentric connection to a moisture-resistant chimney and combustion air through an external wall (room sealed)		Calculation to EN 13384 (balanced flue chimney manufacturer)	
C93x ⁵⁾	Vertical flue for duct installation with horizontal concentric connection line	DN 80/125	27	11
		DN 110/160	41	41
C93x ⁵⁾	Vertical flue for duct installation with horizontal concentric connection line	DN 80/125 flexible	20	8
		DN 110/160 flexible	32 ⁶⁾	32 ⁶⁾

¹⁾ Available fan draught: CGB-2-38: 20-159 Pa, CGB-2-55: 20-164 Pa (maximum length corresponds to the total length from the heat generator to the flue outlet)

²⁾ For calculating the pipe length, please refer to the operating instructions for contractors

³⁾ In Germany only up to 11 kW, or 28 kW for DHW heating

⁴⁾ Only calculated at full load (due to wind pressure 25 Pa)

⁵⁾ Shaft roughness: 2 mm, square 2 cm annular gap, round 3 cm annular gap

⁶⁾ max. 30 m vertical flexible flue (system limit)

Note: Systems C33x and C83x are also suitable for installation in garages.

The calculation was made taking the pressure conditions into account (geodetic height: 325 m).

Where necessary, adapt the installation examples to the relevant building regulations and requirements in your country/region. Any questions relating to the installation, particularly regarding the provision of inspection components and ventilation apertures (ventilation generally required above 50 kW output) should be raised with your local flue gas inspector prior to installation.

The specified lengths refer to concentric balanced flues and standard flues and apply to original WOLF components only.

Calculating the balanced flue length

The calculated length of the balanced flue or standard flue is derived from the straight pipe length and the length equivalent of any pipe bends.

Example:

Length of straight balanced flue pipe = 1.5 m

87° bend = 2.0 m

2 x 45° bends = 2 x 1.2 m

L = 1.5 m + 1 x 2.0 m + 2 x 1.2 m

L = 5.9 m

Balanced flue systems DN 60/100, DN 80/125 and DN 110/160 are certified as systems together with WOLF wall mounted gas condensing boilers.

The following balanced flues or standard flues with CE-0036-CPD-9169003 certification may be used:

- Flue DN 60, DN 80, DN 110, DN 125 and DN 160
- Concentric balanced flue DN 60/100, DN 80/125 and DN 110/160
- Concentric balanced flue (on an external wall) DN 80/125
- Flexible flue DN 60, DN 80 and DN 110

Wolf accessories are supplied with the necessary ID labels.

Please also observe the installation information supplied with the accessories.

Bend	Type	Calculated length [m]
30°	Single wall	0.4
45°	Single wall	0.6
87°	Single wall	1.0
30°	Concentric	0.7
45°	Concentric	1.2
87°	Concentric	2.0

COMFORTLINE WALL MOUNTED GAS CONDENSING BOILERS ACCESSORIES

CGB-2 Wall-mounted gas condensing boiler for heating

Tested in accordance with EC directives and DIN EN 483 for heating systems according to DIN EN 12828 with flow temperatures up to 90 °C and 6 bar permissible operating pressure. Suitable for modulating operation down to room temperature; modulating output control; premix burner for natural gas E, LL or LPG; sealed combustion chamber for open flue and room sealed operation.

Control unit with gas burner control unit, electronic ignition and ionisation flame monitor; variable speed fan.

White RAL 9016 powder-coated casing.

Accessories	CGB-2-38	CGB-2-55
Control accessories		
AM display module	○	○
BM-2 programming unit	○	○
Wall mounting base	○	○
RM-2 room module	○	○
AFB analogue remote control	○	○
MM-2 mixer module	○	○
Solar module SM1-2	○	○
Solar module SM2-2	○	○
KM-2 cascade module	○	○
Heat meter set for capturing solar yield	○	○
WOLF Link home / pro - LAN/WiFi interface module incl. PC software	○	○

- Included in standard delivery
- Optional accessory

COMFORTLINE WALL MOUNTED GAS CONDENSING BOILERS ACCESSORIES

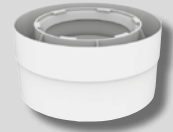
Accessories	CGB-2-38	CGB-2-55
Hydraulic accessories		
Connection set for surface mounting	<input type="radio"/>	<input type="radio"/>
External safety valve 3/4" female thread up to 3 bar	<input type="radio"/>	<input type="radio"/>
Internal safety valve 3 bar for installation in appliance	<input type="radio"/>	<input type="radio"/>
Internal safety valve 6 bar for installation in appliance	<input type="radio"/>	<input type="radio"/>
Drain outlet kit R1" with trap and bezel, grey plastic	<input type="radio"/>	<input type="radio"/>
Sludge separator, vertical	<input type="radio"/>	<input type="radio"/>
Sludge separator, rotatable	<input type="radio"/>	<input type="radio"/>
Microbubble separator	<input type="radio"/>	<input type="radio"/>
Low loss header, up to 4.5 m ³ /h	<input type="radio"/>	<input type="radio"/>
Stainless steel plate heat exchanger for hydraulic separation	<input type="radio"/>	<input type="radio"/>
Heating circuit connection kit, extendable	<input type="radio"/>	<input type="radio"/>
Overcurrent jumper connection set	<input type="radio"/>	<input type="radio"/>
3-way diverter valve 230 V, connector cable, 1" female thread connections, RCS = 12	<input type="radio"/>	<input type="radio"/>
Diverter valve motor 230 V for easy replacement of CGB-35/50	<input type="radio"/>	<input type="radio"/>
Air / flue gas routing		
Flue gas connection adaptor for easy replacement of CGB-35/50	<input type="radio"/>	<input type="radio"/>
Gas supply accessories		
Gas ball valve (angle or straight-through version), chrome plated, with thermally activated shut-off valve	<input type="radio"/>	<input type="radio"/>
Gas type conversion sets for LL and LPG	<input type="radio"/>	<input type="radio"/>

● Included in standard delivery

○ Optional accessory

Direct replacement of CGB-35/50 made easy:

- 1:1 compatible with flue gas connection adapter
However, replacing older flue gas systems is recommended



- Secure system [option 1]:
Connect external safety valve to new heating circuit connection set - make sure installation location is easy to access



- Secure system [option 2]:
Connect internal safety valve in the wall mounted gas condensing boiler to the flow - replacement possible without draining a lot of heating water



- An expansion vessel can also be connected to the new expandable connection set, along with a separate overcurrent jumper (if retrofitting the system and there is no space for a low loss header).



- 24V motor and 24V cable of the CGB-35/50 diverter valve are not compatible with CGB-2
We recommend the new 3-way diverter valve.



- If conversion is difficult, the existing motor can be easily replaced with the 230V motor without draining heating water

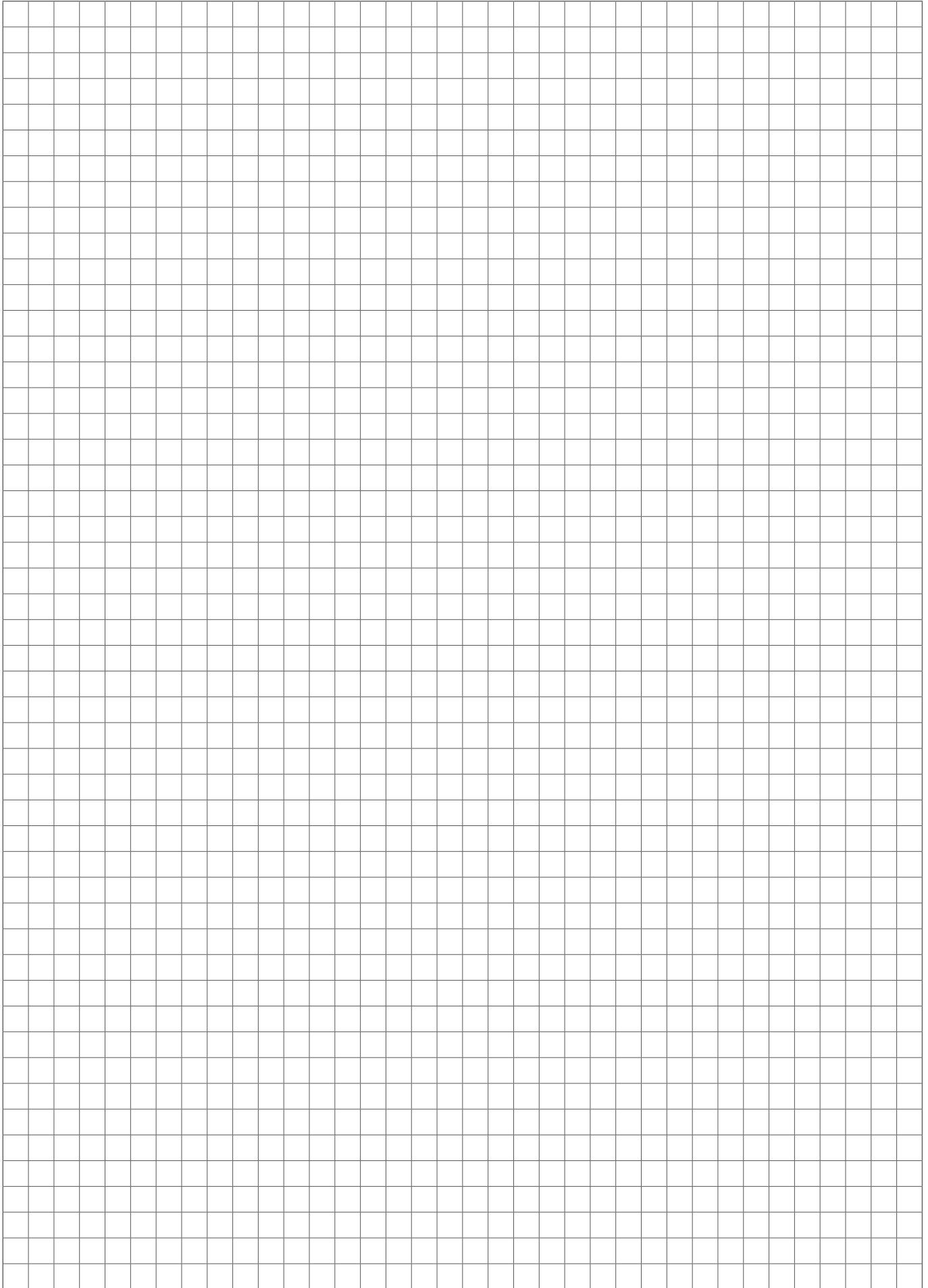


- The header temperature sensor of a low loss header can be connected directly to the appliance - no cascade module required

- Treat water while complying with limits

- The installation instructions must also be followed

NOTES



Dealer address

WOLF GMBH / POSTFACH 1380 / D-84048 MAINBURG / TEL. +49.0.875174-0 / FAX +49.0.875174-1600 / www.WOLF.eu

